



United States
Department of
Agriculture

Natural
Resources
Conservation
Service

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Date: December 4, 2000

WASHINGTON BULLETIN NO. WA210-1-01

SUBJECT: COMMENTS ON DRAFT POLICY AND PROCEDURES FOR EVALUATION OF EXISTING STRUCTURES ASSOCIATED WITH DAIRY AND ANIMAL FEEDING OPERATIONS (AFO).

Purpose. To distribute subject information and ask for comments

Expiration Date: January 19, 2001

RESPONSE DUE BY: JANUARY 19, 2001

The final report from the Dairy Technical Advisory Committee, dated December 2, 1998, contained the following recommendation:

"When new structures are to be tied, or connected, to older structures, the NRCS should provide guidance to dairy planners on a case-by-case basis, evaluating existing structures for groundwater risk, safety, health, and function."

A technical committee was formed and has developed draft policy and procedures for evaluation of existing structures associated with Dairy and Animal Feeding Operations (AFO).

The draft policy is attached for your review and comment. Please provide comments to Larry Johnson, State Conservation Engineers, not later than January 19, 2001, at larry.johnson@wa.usda.gov or the above address.

/s/

LAWRENCE A. JOHNSON
State Conservation Engineer

Attachment

DIST: This bulletin is being sent via email to all NRCS employees only.

PART 521 – POLLUTION ABATEMENT AND WATER QUALITY IMPROVEMENT

WA521.01

WA521.01 Pollution abatement in conservation operations.

(a) Planning

1. Dairy Operations / Animal Feeding Operations, Evaluation of Existing Structures

Engineering performance assessment policy for the review of existing structural practices for dairy or animal feeding operations is contained in this section. FOTG Section IV and the Practice Standard Checklist, NEM 521.01(a) Exhibit 1 through Exhibit 22, shall be the required criteria for assessing the structural practice performance and condition.

NRCS acceptance of each existing practice shall comply with the following policy.

(a) Practices installed with an NRCS (or SCS) approved design and construction certification that are part of an existing Operation.

- I. Shall be accepted as meeting NRCS Standards and Specifications.
- II. Each practice approved and certified by NRCS (or SCS) requires no further technical assessment, and is designated as meeting the appropriate practice standard at the time of installation and certification.
- III. The practice must be functioning as originally designed and has been regularly maintained. Any repairs or rehabilitation needed shall be consistent with NEM 501.22(a).

(b) Practices installed without NRCS assistance or approval that are part of an existing Operation.

- I. Each practice shall be reviewed according to the appropriate Practice Standard Checklist, NEM 521.01(a) Exhibit 1 through Exhibit 22. Checklist performance measures were developed to comply with the appropriate practice standard that was in place at the time the installation of the practice was completed.
- II. Each practice reviewed that meets the acceptable performance measures as set forth in the appropriate Practice Standard Checklist, NEM 521.01(a) Exhibit 1 through Exhibit 22, is designated as meeting the appropriate practice standard that was in place at the time of the practice installation.
- III. Practices that do not meet the performance measures as set forth in the appropriate Practice Standard Checklist, NEM 521.01(a) Exhibit 1 through Exhibit 22, shall be evaluated and documented in the comment section with the requirements to modify the practice to comply with NEM 501.22.(b).
- IV. NRCS employees or others operating under the technical supervision of an NRCS employee, who certify that existing practices meet the performance measures, as set forth in the Practice Standard Checklist, NEM 521.01(a) Exhibit 1 through Exhibit 22, shall have appropriate engineering Application job approval authority.

WA521-2

(EXHIBIT 1)

PRACTICE STANDARD
PERFORMANCE MEASURE CHECKLIST

Practice Number	313
Practice Name	WASTE STORAGE FACILITY, (Pond)
Land Owner	
Date Installed (MM/YY)	
Purpose(s)	
Location Description	

Performance Measures	Yes	No	n/a
1. The pond either has a storage capacity that is less than 10 acre-feet above natural ground level, or was constructed with a "Construction Permit" issued by the DOE Dam Safety Section.			
2. A flood event has not inundated or damaged the pond.			
3. The pond either does not receive runoff from an outside drainage area or has an emergency spillway.			
4. The pond either was built before January 1994, Or was constructed with the bottom of the pond above the seasonal high water table; Or was excavated with the bottom of the pond below the seasonal high water table elevation, and a perimeter drain was installed to reduce the seasonal high water table to below the bottom of the pond elevation, Or was approved by the WA Department of Ecology.			
5. The pond either was constructed before February 1987; or was not located within 300 feet of a domestic water source. if it was constructed in GP, GW, SP, or SW soil, Or was constructed with a GM, GC, SM, SC, ML, CL, or CH soil liner, Or was sealed with bentonite, Or was constructed with a synthetic liner.			
6. The pond either was constructed before January 1994, Or was constructed with a CH, CL, MH, ML, SM, SC, GM, or GC soil liner, Or was sealed with bentonite, Or was constructed with a synthetic liner?			
7. The embankment has a minimum top width of 8 feet, and no side slope is steeper than 2 to 1 and the combined side slopes are 5 to 1 or flatter?			
8. Are earth embankments free of any evidence of seepage?			
9. Are pond embankments free of significant eroded areas?			
10. Side slopes that were excavated below the natural ground elevation are stable			
11. The pond has a permanent inlet that is resistant to plugging and has protected the inside of the pond from erosion			
12. Some provision is provided so that the pond can be emptied.			
13. Appropriate safety precautions have been addressed to restrict animal and human access.			
14. Operation and maintenance has been performed to ensure structural stability.			

WA521-3

(EXHIBIT 1)

Practice Number	313
Practice Name	WASTE STORAGE FACILITY, (Pond)
Land Owner	

Practice Acceptance Criteria	Complies with NRCS Practice Standards	Does not comply with NRCS Practice Standards
If all performance measures are checked "Yes" or "n/a" the practice is performing in compliance with NRCS Practice Standards.		

[illegible]

Signed:

Date:

(EXHIBIT 2)

PRACTICE STANDARD
PERFORMANCE MEASURE CHECKLIST

Practice Number	313
Practice Name	WASTE STORAGE FACILITY, (Structure)
Land Owner	
Date Installed (MM/YY)	
Purpose(s)	
Location Description	

Performance Measures:	Yes	No	n/a
Applies to: (Circle) Slabs Curbs Tanks Walls Roofs			
1. The structure was originally installed to store manure			
2. There has been no movement or settlement of the structure due to foundation conditions.			
3. There has been no movement of the structure due to hydrostatic loads.			
4. There has been no lateral movement of any component of the structure due to external or internal loadings.			
5. Manure tank covers show no signs of distress.			
6. If the facility has a roof, the roof or supporting members has not been damaged from snow or wind.			
7. Concrete components are not cracked or broken, Steel components are not damaged by corrosion, and Timber components are structurally sound and not damaged by decay.			
8. Appropriate safety precautions have been addressed.			
9. Has O & M been achieved?			

Practice Acceptance Criteria	Complies with NRCS Practice Standards	Does not comply with NRCS Practice Standards
If all performance measures are checked "Yes" or "n/a" the practice is performing in compliance with NRCS Practice Standards.		

Comments

Signed: _____

Date: _____

WA521-5

(EXHIBIT 3)

**PRACTICE STANDARD
PERFORMANCE MEASURE CHECKLIST**

Practice Number	350
Practice Name	SEDIMENT BASIN
Land Owner	
Date Installed (MM/YY)	
Purpose(s)	
Location Description	

Performance Measures	Yes	No
1. Does the sediment basin have a stable outlet?		
2. Does the sediment basin have a minimum top width of 6 feet?		
3. Are the fill side slopes 2:1 with combined front and back side slopes not less than 5:1 or flatter And/Or Are the cut side slopes 1:1 or flatter?		
4. Is the sediment basin sized with adequate detention time for sediment settlement?		
5. Is the capacity of the sediment basin maintained with cleaning out the sediment build up?		
6. Has O&M been achieved?		

Practice Acceptance Criteria	Complies with NRCS Practice Standards	Does not comply with NRCS Practice Standards
If all performance measures are checked "Yes" the practice is performing in compliance with NRCS Practice Standards.		

Comments

Signed:

Date:

WA521-6

(EXHIBIT 4)

**PRACTICE STANDARD
PERFORMANCE MEASURE CHECKLIST**

Practice Number	356
Practice Name	DIKE (Class III Dikes)
Land Owner	
Date Installed (MM/YY)	
Purpose(s)	
Location Description	

Performance Measures	Yes	No
1. Has the structure been maintained to its original height and shape?		
2. Is the earthfill material well compacted?		
3. Are side slopes 1:1 or flatter?		
4. Has O&M been achieved?		

Practice Acceptance Criteria	Complies with NRCS Practice Standards	Does not comply with NRCS Practice Standards
If all performance measures are checked "Yes" the practice is performing in compliance with NRCS Practice Standards.		

Comments

Signed: _____ **Date:** _____

(EXHIBIT 5)

**PRACTICE STANDARD
PERFORMANCE MEASURE CHECKLIST**

Practice Number	358
Practice Name	WASTE TRANSFER
Land Owner	
Date Installed (MM/YY)	
Purpose(s)	
Location Description	

Performance Measures	Yes	No	n/a
1. The collection structure, slabs and curbs meet the performance measures for 313 waste storage structures?			
2. Human and animal access to the structure is restricted with adequate safety barriers?			
3. The pump is installed as per manufacturer recommendations and is functioning adequately to transfer the waste?			
4. The pipeline is adequately sized and transfers the waste without signs of plugging, leaks or erosion?			
5. There are adequate safety measures taken to prevent excess pressures in the pipeline?			
6. Gravity pipelines and other conduits have adequate capacity and access for clean out?			
7. Has O&M been achieved?			

Practice Acceptance Criteria	Complies with NRCS Practice Standards	Does not comply with NRCS Practice Standards
If all performance measures are checked "Yes" or "n/a" the practice is performing in compliance with NRCS Practice Standards.		

Comments

Signed:

Date:

WA521-8

(EXHIBIT 6)

**PRACTICE STANDARD
PERFORMANCE MEASURE CHECKLIST**

Practice Number	362
Practice Name	DIVERSION
Land Owner	
Date Installed (MM/YY)	
Purpose(s)	
Location Description	

Performance Measures	Yes	No
1. Does the diversion have a stable outlet?		
2. If the diversion is not cultivated, is there a good vegetative cover?		
3. Does the diversion function without overtopping?		
4. Are animals prevented from causing damage to the diversion?		
5. Does the diversion function as intended?		
6. Has O & M been achieved?		

Practice Acceptance Criteria	Complies with NRCS Practice Standards	Does not comply with NRCS Practice Standards
If all performance measures are checked "Yes" the practice is performing in compliance with NRCS Practice Standards.		

Comments

Signed:

Date:

WA521-9

PRACTICE STANDARD PERFORMANCE MEASURE CHECKLIST

Practice Number	382
Practice Name	FENCE
Land Owner	
Date Installed (MM/YY)	
Purpose(s)	
Location Description	

Performance Measures	Yes	No
1. Is the material adequate for the intended purpose (wire, posts, etc.)?		
2. Is the fence functioning for the intended purpose(s)?		
3. Is livestock excluded?		
4. Has O&M been achieved?		

Practice Acceptance Criteria	Complies with NRCS Practice Standards	Does not comply with NRCS Practice Standards
If all performance measures are checked "Yes" the practice is performing in compliance with NRCS Practice Standards.		

[illegible]

Date:

(EXHIBIT 8)

**PRACTICE STANDARD
PERFORMANCE MEASURE CHECKLIST**

Practice Number	393
Practice Name	FILTER STRIP
Land Owner	
Date Installed (MM/YY)	
Purpose(s)	
Location Description	

Performance Measures	Yes	No
1. Does vigorous vegetation exist in the filter strip area?		
2. There are no rills or small channels within the filter area?		
3. There is no evidence or observation of polluted runoff discharge to any water body from the lower end of the filter strip?		
4. Has O&M been achieved?		

Practice Acceptance Criteria	Complies with NRCS Practice Standards	Does not comply with NRCS Practice Standards
If all performance measures are checked "Yes" the practice is performing in compliance with NRCS Practice Standards.		

Comments

Signed: _____

Date: _____

WA521-11

(EXHIBIT 9)

**PRACTICE STANDARD
PERFORMANCE MEASURE CHECKLIST**

Practice Number	412
Practice Name	GRASSED WATERWAY
Land Owner	
Date Installed (MM/YY)	
Purpose(s)	
Location Description	

Performance Measures	Yes	No
1. Does adequate vegetation exist?		
2. There is no evidence of erosion or flooding?		
3. There is no evidence of damage caused by livestock or machinery?		
4. Has O&M been achieved?		

Practice Acceptance Criteria	Complies with NRCS Practice Standards	Does not comply with NRCS Practice Standards
If all performance measures are checked "Yes" the practice is performing in compliance with NRCS Practice Standards.		

Comments

Signed: _____

Date: _____

WA521-12

PRACTICE STANDARD PERFORMANCE MEASURE CHECKLIST

Practice Number	442
Practice Name	SPRINKLER SYSTEM
Land Owner	
Date Installed (MM/YY)	
Purpose(s)	
Location Description	

Performance Measures	Yes	No
1. Is there an even distribution pattern and nozzle pressure?		
2. Is there no surface runoff occurring due to a design flaw of the system hardware?		
3. Has O&M been achieved?		

Practice Acceptance Criteria	Complies with NRCS Practice Standards	Does not comply with NRCS Practice Standards
If all performance measures are checked "Yes" the practice is performing in compliance with NRCS Practice Standards.		

[illegible]

Date:

PRACTICE STANDARD PERFORMANCE MEASURE CHECKLIST

Practice Number	516
Practice Name	PIPELINE
Land Owner	
Date Installed (MM/YY)	
Purpose(s)	
Location Description	

Performance Measures	Yes	No
1. Are valves, vents, drains, inlets and outlets protected and functioning properly?		
2. Is the pipeline protected (PVC, Steel Coated, HDPE, etc.) with no evidence of leaks?		
3. Are there overflow protection measures to guard against erosion and transfer of pollutants?		
4. Is there adequate water supply?		
5. Has O&M been achieved?		

Practice Acceptance Criteria	Complies with NRCS Practice Standards	Does not comply with NRCS Practice Standards
If all performance measures are checked "Yes" the practice is performing in compliance with NRCS Practice Standards.		

[illegible]

Date:

(EXHIBIT 12)

**PRACTICE STANDARD
PERFORMANCE MEASURE CHECKLIST**

Practice Number	521A
Practice Name	POND SEALING OR LINING, (Flexible Membrane)
Land Owner	
Date Installed (MM/YY)	
Purpose(s)	
Location Description	

Performance Measures	Yes	No
Applies to: (Circle One) HDPE 40 mil LLPDE 40 mil PVC 30 mil EPDM 45 mil Other:_____.		
1. Does the liner material equal or exceed the minimum thickness requirements stated above? Or If a liner material type is used, does it meet the minimum manufacturer's requirements for liner thickness for the intended purpose?		
2. Is the liner installed per manufacturer's recommendation and specifications?		
3. Was high water table addressed in the design and installation?		
4. Were seams tested for leaks?		
5. Was a ventilation system addressed in the design and installation?		
6. Is the liner protected from livestock, erosion and equipment damage?		
7. Does the liner appear to be in good working order?		
8. Has O & M been achieved?		

Practice Acceptance Criteria	Complies with NRCS Practice Standards	Does not comply with NRCS Practice Standards
If all performance measures are checked "Yes" the practice is performing in compliance with NRCS Practice Standards.		

Comments

Signed: _____

Date: _____

WA521-15

(EXHIBIT 13)

**PRACTICE STANDARD
PERFORMANCE MEASURE CHECKLIST**

Practice Number	521C
Practice Name	POND SEALING OR LINING (Bentonite)
Land Owner	
Date Installed (MM/YY)	
Purpose(s)	
Location Description	

Technical Information
1. Indicate the USCS soil classification of the liner material:_____.
2. Indicate the application rate of bentonite:_____ lbs/sf.
3. Indicate the treated blanket thickness:_____ inches.

Performance Measures	Yes	No
1. Was the bentonite application method and rate consistent with the NRCS practice standard, based on unified soil classification or laboratory tests?		
2. Was high water table addressed in the design and installation?		
3. Is the liner protected from livestock, erosion and equipment damage?		
4. Does the liner appear to be in good working order?		
5. Has O&M been achieved?		

Practice Acceptance Criteria	Complies with NRCS Practice Standards	Does not comply with NRCS Practice Standards
If all performance measures are checked "Yes" the practice is performing in compliance with NRCS Practice Standards.		

Comments

Signed: _____

Date: _____

WA521-16

(EXHIBIT 14)

**PRACTICE STANDARD
PERFORMANCE MEASURE CHECKLIST**

Practice Number	533
Practice Name	PUMPING PLANT
Land Owner	
Date Installed (MM/YY)	
Purpose(s)	
Location Description	

Performance Measures	Yes	No	n/a
1. Are back flow valves in place, if waste is being pumped and the water source is a well?			
2. Are adequate fish screens installed if pumping water from a stream?			
3. Is spill water causing a water quality problem?			
4. Has O&M been achieved?			

Practice Acceptance Criteria	Complies with NRCS Practice Standards	Does not comply with NRCS Practice Standards
If all performance measures are checked "Yes" or "n/a" the practice is performing in compliance with NRCS Practice Standards.		

Comments

Signed: _____ **Date:** _____

(EXHIBIT 15)

PRACTICE STANDARD
PERFORMANCE MEASURE CHECKLIST

Practice Number	558
Practice Name	ROOF RUNOFF MANAGEMENT
Land Owner	
Date Installed (MM/YY)	
Purpose(s)	
Location Description	

Performance Measures	Yes	No	n/a
1. Roof gutters or rock filled trenches (French Drains) do not overtop during heavy rainstorms.			
2. Are gutters and downspouts are made from durable materials?			
3. Are gutters and downspouts are securely fastened?			
3. Do adequate outlets exist for the roof gutters and downspouts and/or rock filled trenches (French Drains)?			
3. Do rock filled trenches (French Drains) do not collect contaminated runoff.			
3. Has O&M been achieved?			

Practice Acceptance Criteria	Complies with NRCS Practice Standards	Does not comply with NRCS Practice Standards
If all performance measures are checked "Yes" or "n/a" the practice is performing in compliance with NRCS Practice Standards.		

Comments

Signed:

Date:

WA521-18

(EXHIBIT 16)

**PRACTICE STANDARD
PERFORMANCE MEASURE CHECKLIST**

Practice Number	561
Practice Name	HEAVY USE AREA PROTECTION
Land Owner	
Date Installed (MM/YY)	
Purpose(s)	
Location Description	

Performance Measures	Yes	No
1. Does the surface treatment cover the entire extent of the heavily used area to minimum required thickness?		
2. Do adequate provisions exist for the collection and disposal of surface runoff?		
3. Has O&M been achieved?		

Practice Acceptance Criteria	Complies with NRCS Practice Standards	Does not comply with NRCS Practice Standards
If all performance measures are checked "Yes" the practice is performing in compliance with NRCS Practice Standards.		

Comments

Signed:

Date:

(EXHIBIT 17)

**PRACTICE STANDARD
PERFORMANCE MEASURE CHECKLIST**

Practice Number	574
Practice Name	SPRING DEVELOPMENT
Land Owner	
Date Installed (MM/YY)	
Purpose(s)	
Location Description	

Performance Measures	Yes	No
1. Does the springbox has adequate material (min. x-section area 1-1/2 square feet)?		
2. Is the outlet 6 inches above the floor?		
3. Is the spring protected from surface water contamination?		
4. Is livestock excluded?		
5. Is the overflow stabilized and not contributing to polluted runoff?		
6. Has O&M been achieved?		

Practice Acceptance Criteria	Complies with NRCS Practice Standards	Does not comply with NRCS Practice Standards
If all performance measures are checked "Yes" the practice is performing in compliance with NRCS Practice Standards.		

Comments

Signed: _____ **Date:** _____

(EXHIBIT 18)

**PRACTICE STANDARD
PERFORMANCE MEASURE CHECKLIST**

Practice Number	580
Practice Name	STREAMBANK PROTECTION
Land Owner	
Date Installed (MM/YY)	
Purpose(s)	
Location Description	

Performance Measures	Yes	No
1. Are livestock excluded from the streambank protected area by fences except at designated watering areas or crossings?		
2. There is no active erosion occurring due to damage from livestock or vehicular traffic?		
3. Are livestock traffic areas adequately protected with sand, gravel, or rock surfacing?		
4. Is the bottom of the stream channel stable or has it been stabilized?		
5. Has O&M been achieved?		

Practice Acceptance Criteria	Complies with NRCS Practice Standards	Does not comply with NRCS Practice Standards
If all performance measures are checked "Yes" the practice is performing in compliance with NRCS Practice Standards.		

Comments

Signed:

Date:

WA521-21

PRACTICE STANDARD PERFORMANCE MEASURE CHECKLIST

Practice Number	587
Practice Name	STRUCTURE FOR WATER CONTROL
Land Owner	
Date Installed (MM/YY)	
Purpose(s)	
Location Description	

Performance Measures	Yes	No
1. Has the structure been functioning for the intended purpose?		
2. Is the structure protected from livestock, erosion, and equipment damage?		
3. Does the structure appear to be in good working order?		
4. Has O&M been achieved?		

Practice Acceptance Criteria	Complies with NRCS Practice Standards	Does not comply with NRCS Practice Standards
If all performance measures are checked "Yes" the practice is performing in compliance with NRCS Practice Standards.		

[illegible]

Date:

(EXHIBIT 20)

**PRACTICE STANDARD
PERFORMANCE MEASURE CHECKLIST**

Practice Number	606
Practice Name	SUBSURFACE DRAIN
Land Owner	
Date Installed (MM/YY)	
Purpose(s)	
Location Description	

Performance Measures	Yes	No
1. Is the pipe outlet free of trash or debris?		
2. Does the subsurface drain have a stable outlet?		
3. Is the outlet protected from rodent and/or fire damage?		
4. Is the subsurface drain adequately sized?		
5. Is the confined animal waste excluded from the subsurface drain?		
6. Has O&M been achieved?		

Practice Acceptance Criteria	Complies with NRCS Practice Standards	Does not comply with NRCS Practice Standards
If all performance measures are checked "Yes" the practice is performing in compliance with NRCS Practice Standards.		

Comments

Signed:

Date:

(EXHIBIT 21)

PRACTICE STANDARD
PERFORMANCE MEASURE CHECKLIST

Practice Number	614
Practice Name	TROUGH OR TANK
Land Owner	
Date Installed (MM/YY)	
Purpose(s)	
Location Description	

Performance Measures	Yes	No
1. Is the tank site protected from livestock damage and erosion?		
2. Is the water supply valve functioning?		
3. Is the shut-off float functioning properly? And/Or Is the trough or tank overflow piped to a desirable point of release?		
4. Has O&M been achieved?		

Practice Acceptance Criteria	Complies with NRCS Practice Standards	Does not comply with NRCS Practice Standards
If all performance measures are checked "Yes" the practice is performing in compliance with NRCS Practice Standards.		

Comments

Signed: _____ Date: _____

(EXHIBIT 22)

PRACTICE STANDARD
PERFORMANCE MEASURE CHECKLIST

Practice Number	620
Practice Name	UNDERGROUND OUTLET
Land Owner	
Date Installed (MM/YY)	
Purpose(s)	
Location Description	

Performance Measures	Yes	No
1. Is the pipe outlet free of trash or debris?		
2. Is the underground outlet stable with no signs of erosion?		
3. Is the outlet protected from rodent and/or fire damage?		
4. Is the underground outlet adequately sized?		
5. Is the confined animal waste excluded from the underground outlet?		
6. Has O & M been achieved?		

Practice Acceptance Criteria	Complies with NRCS Practice Standards	Does not comply with NRCS Practice Standards
If all performance measures are checked "Yes" the practice is performing in compliance with NRCS Practice Standards.		

Comments

Signed:

Date: